

Claims:

1. A device for picking up and comminuting clippings in a mowing unit (10) used for taking care of lawns and fields, whereby the mowing unit (10) comprises at least one mowing assembly consisting of at least one mowing aggregate (20), characterized in that the device has a chopping device (30) for sucking in and comminuting clippings produced by at least one mowing aggregate (20), and for feeding the comminuted clippings to a discharge device (80), whereby the rotating axle (50) of the chopping device (30) is at an angle relative to the rotating axle (21) of the mowing aggregate (20).
10
2. The device according to Claim 1, characterized in that the angle between the rotating axle (50) of the chopping device (30) and the rotating axle (21) of the mowing aggregate (20) ranges from 60° to 90°.
3. The device according to one or both of Claims 1 and 2, characterized in that the chopping device (30) is arranged above at least one mowing aggregate (20).
15
4. The device according to one or more of the preceding claims, characterized in that the mowing unit (10) encompasses at least one motor-driven tractor comprises (10) and two mowing assemblies, whereby the mowing assemblies are connected pivotally to the tractor by means of at least one horizontal axle.
20
5. The device according to Claim 4, characterized in that the mowing assemblies are arranged in a V-formation on the front of a tractor (10).
25

6. The device according to one or both of Claims 4 and 5, characterized in that the mowing assemblies arranged in a V-formation can pivot around an axle that is perpendicular to the ground surface to be mowed.

5

7. The device according to one or both of Claims 5 and 6, characterized in that a mowing assembly consists of at least two mowing aggregates (20) that rotate inwards in the direction of the longitudinal axis of the tractor (10) and the chopping device (30) extends over at least the two mowing aggregates that are closest to the tractor.

10

8. The device according to one or more of the preceding claims, characterized in that the axle (50) of the chopping device (30) around which several chopping means (40) rotate extend inside a housing (60) that is open towards the side of the mowing aggregate (20) so that it can pick up the clippings (120) while, on the opposite side, there is a discharge opening that is connected to a discharge device (80).

15

9. The device according to Claim 8, characterized in that the discharge opening is shaped like a funnel.

20

10. The device according to one or more of the preceding claims, characterized in that different discharge directions of the discharge device (80) can be selected.

25

11. The device according to Claim 10, characterized in that the discharge device (80) consists of a first chute that is rigidly attached to the chopping device (30), whereby the first chute is followed by a slewing gear (81) that is connected to a second chute (82), whereby the second chute can be turned by means of the slewing gear.

12. The device according to Claim 11, characterized in that there is at least one adjustable flap (83) at the end of the second chute (82) for purposes of regulating the direction and range of the discharge.

10

13. The device according to one or more of Claims 8 to 12, characterized in that the height of the discharge device (80) can be adjusted.

14. The device according to one or more of the preceding claims, characterized in that, above each of the mowing assemblies, there is at least one cover (70) which has an outer rim (71) on the side of the tractor and which is open in the forward direction.

15. The device according to Claim 14, characterized in that the cover (70) is positioned at a certain distance from the cutting means (22) of the mowing aggregates at which distance the clippings (120) are only slightly squashed under the cover.

16. The device according to Claim 15, characterized in that the distance between the cover (70) and the cutting means (22) ranges from 10 cm to 55 cm.

17. The device according to one or more of Claims 14 to 16, characterized in that the cover (70) has a cutout in the area of the chopping device (30).

5 18. The device according to one or more of Claims 14 and 17, characterized in that the cover (70) and the housing (60) of the chopping device (30) are designed as a single piece.

19. The device according to one or more of the preceding claims,
10 characterized in that tractor (10) is driven by an engine (90) and by a main drive shaft (100).

20. The device according to Claim 19, characterized in that the mowing aggregate (20) is driven by the drive shaft (100).

15

21. The device according to one or both of Claims 19 and 20, characterized in that the chopping device (30) is driven by the drive shaft (100).

22. The device according to one or more of the preceding claims,
20 characterized in that the mowing assemblies and the chopping device (30) are driven by V-belts.

23. The device according to one or more of the preceding claims, characterized in that different degrees of comminution can be selected for the
25 chopping device (30).

24. The device according to one or more of the preceding claims,
characterized in that the mowing aggregates (20) have several blades (22) detachably
affixed to the ends of each of the legs of a star-shaped carrier element (24), whereby
5 this carrier element rotates around an axle (21).

25. The device according to one or more of the preceding claims,
characterized in that, in the area of rotating axle (21), the mowing aggregates (20)
have additional rotation elements (25) with which the clippings (120) are made to
10 rotate and transported to the middle of the vehicle.

26. The device according to Claim 25, characterized in that the rotation
elements (25) are formed by a drum with wings.

15 27. The device according to Claim 25, characterized in that the rotation
elements (25) are formed by a drum with a rotating screw.

28. The device according to one or more of the preceding claims,
characterized in that the mowing unit (10) has a conveying device (130) into which
20 the clippings are discharged, whereby the conveying device (130) transports the
clippings to a collecting container (110).

29. The device according to Claim 28, characterized in that the conveying
device (130) consists of a chute in which the clippings are transported by means of a
25 conveying screw (131).

30. The device according to Claim 29, characterized in that the chute of the conveying device (130) is designed as a sieve that is open towards the top.

5 31. The device according to one or more of the preceding claims, characterized in that the mowing unit (10) has a collecting container (110) of which at least one side wall can flip open towards the outside.

32. The device according to Claim 31, characterized in that side wall
10 and/or the bottom of the collecting container (110) is designed as an endless floor (111) so that the container can be emptied.

33. The device according to one or more of the preceding claims, characterized in that the height of the mowing aggregates (20) can be varied
15 independently of each other.

34. The device according to one or more of the preceding claims, characterized in that the height of each of the mowing aggregates (20) is set by means of a height guide (26) located in the middle, underneath the aggregate.
20

35. The device according to Claim 34, characterized in that the height guide (26) is in the form of a tube that encircles the appertaining rotating axle (21) of the mowing aggregate (20) and it has at least one castor, roller, rail, ball or other guide element.
25

36. A method for mowing and picking up clippings by means of a mowing unit, whereby the mowing unit has a chopping device, characterized by the following steps:

5 • the plants are cut off by cutting means (22) of at least one mowing aggregate (20),

 • the clippings are sucked in by a chopping device (30), comminuted there and subsequently released in the vicinity of the mowing unit;

10

 • after drying in the vicinity, the clippings are picked up by the chopping device (30) and conveyed to a collecting means.